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XII.—*On the Birds of the Interior of British North America.*

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(Concluded from p. 87).

Order IV. RASORES.

89. ECTOPISTES MIGRATORIA.

The first Passenger Pigeon arrived at Fort Carlton in 1858, on the 23rd of May; and by the middle of June numerous flocks were making their way northwards. They may be distinguished at a long distance, from water-fowl or waders, by their flight being in no particular order, but on the principle of “every one for himself, and the devil take the hindermost.” On the Mackenzie Mr. Ross observes that it reaches Fort Norman in 65°, while Sir John Richardson has stated that on the coast of Hudson’s Bay it is only found as far north as 58° in some summers.

90. TETRAO OBSCURUS (Say).

—— *richardsonii* (Douglas).

That one or both of these fine Grouse inhabits the “interior” of British North America is certain from specimens collected by Mr. Douglas, Mr. Drummond, Mr. Bernard Ross, and myself. Mr. Ross considers his to be *T. richardsonii*—the black-tailed and smaller species, to which also I refer the figure of the male in the ‘Fauna Bor.-Am.’ The specimen which I brought home, mentioned in my original list (‘Ibis,’ vol. iv. p. 8), measured 18½ inches in length and 8 inches in the wing: another female, shot a week later, differed only in being one inch shorter in the

total length. The eye was of a light yellowish brown; feet very light greenish ash, feathered as far as the division of the toes; bill dusky brown; patch above the eye yellow. A decided half-erected crest is observable on the bird's head when alive. In my wanderings, I met with these birds only in or near the pine-woods on the slopes of the Rocky Mountains; but, having only killed females, I cannot be certain of the species. One or the other Dusky or Black-tailed Grouse ranges towards the Pacific, as far as the Cascade Mountains of Oregon, Washington, and British Columbia, and along the Rocky Mountains from the head waters of the Platte to the Liard River, a tributary of the Mackenzie. When the two species are properly defined, I think it likely that *T. richardsonii* will turn out to be the more northern.

TETRAO CANADENSIS.

The Canada Grouse is given in the 'Fauna Bor.-Am.' as a resident in the thick spruce-forests of the interior, and one is there noted from the eastern declivity of the Rocky Mountains: there is also a specimen in the Smithsonian Institution from Red River Settlement; and it is given by Mr. Murray from Hudson's Bay. I found it as far west as Fort Carlton; and Mr. Ross has traced it northward on the Mackenzie to the Arctic coast.

91. TETRAO FRANKLINI.

This bird, first made known as a distinct species, by specimens from the Rocky Mountains, by the lamented David Douglas, seems to be confined to that range and the country lying between it and the Pacific. Not being aware of the existence of a bird closely allied to *T. canadensis*, I did not take any particular care in examining individuals which I obtained at different times on the Saskatchewan; but still I think, if I had come across this bird, I should have been attracted by the dissimilarity. The first time I observed Franklin's Grouse was while following an Indian trail through thick pine-woods, from the summit of the Kootenay Pass into the valley of the Flathead River, on the 21st of August 1858. I do not know what induced me to shoot the bird, for it was not my custom to waste ammunition; but it may have been that I was in better humour than usual from having just

crossed the watershed of the Rocky Mountains, and that, too, by a pass hitherto untrodden by any white man. I was some distance ahead of my party, and on foot, having, as the descent was rather steep, tied up the reins and stirrups and allowed my riding-horse to follow along with the pack-animals; and as I proceeded along the Indian path, a Grouse rose and perched itself on a projecting branch. My double rifle being over my shoulder, a bullet through its body brought the bird to the ground. It was in the female plumage, $13\frac{3}{4}$ in. in length, 7 in. in the wing, with a hazel eye, and bright patch of vermilion over it. I was at once struck with a certain dissimilarity to the Canada Grouse, a bird I knew well; and this was further strengthened by finding, when it came to be cooked, that the flesh was white, while any one who has lived in Canada or the north-eastern States knows that the Spruce Partridge is distinguished from the "white-flesher"—the Birch Partridge or Ruffed Grouse (*Bonasia umbellus*)—by the darkness of its flesh, which has usually a very turpentine flavour, thought to be produced by the habit of feeding on spruce-leaves. On the 24th, while still in the mountains, one of my men shot a male; it was not, however, in quite perfect plumage. Its breast was black, with white spots at the ends of some of the feathers; throat nearly black, with an indistinct white line surrounding it; and there was not a sign of any colour but black in the tail-feathers; over the eye was bright scarlet; length 17 in., and wing $7\frac{1}{4}$: this bird had also been shot with ball, and therefore I did not preserve it. On the day following we got amongst a covey, and killed six of them; but they were all young, except the old female, which was minus her tail-feathers. They were just as unsuspicious and stupid as the Canada Grouse, allowing themselves to be shot down off the trees without making any attempt to escape. As I was recrossing the mountains on the 3rd of September, I managed to procure a pretty good female specimen ('Ibis,' vol. iv. p. 8). It measured 15 in. in length, and $6\frac{3}{4}$ in the wing; had the eye brown, bill dusky, and feet ash. I observe that Mr. Ross does not include Franklin's Grouse among the birds of the Mackenzie; and I may mention that there is an

error in the 'Fauna Bor.-Am.' in the reference to a figure of this species, pl. 61 being evidently *T. canadensis*.

92. PEDICETES PHASIANELLUS.

Taking the place, on the northern prairies, of the Prairie Hen (*Cupidonia cupido*), the Sharp-tailed Grouse (the "Pheasant" of the fur-traders and half-breeds, and *Ahkis-skieu* of the Cree Indians) is very generally distributed throughout the interior. It is found in the wooded districts, as well as on the plains; but in the former it generally resorts to the most open places. It came under my observation first just below the forks of the Saskatchewan; and thence I found it to the Rocky Mountains, and also at the western base of the range. It also inhabits Red River Settlement and Northern Minnesota, extends eastward to the shores of Hudson's Bay, and Mr. Ross notes it on the Mackenzie as far north as the Arctic Circle. My specimens ('Ibis,' vol. iv. p. 8) were both obtained at Fort Carlton, in which locality the bird was found to breed: the eggs are as many as a dozen, of a chocolate-brown, with minute speckles of dark brown, hatched on the ground. During my stay in the Indian country, I could not but have constant opportunities of observing the habits of the Sharp-tailed Grouse at all seasons of the year, where I have shot hundreds of them; in fact, when hard pressed for food, I often existed for days together on no other fare. Like the Ruffed Grouse, they seem to be polygamous, collecting in the spring at certain chosen spots for the purpose of love-making on a grand scale, as I shall presently describe. After the breeding-season they are to be found in families at the edge of the prairies, or rather in the semi-wooded country bordering the treeless prairie wastes, where they often perch on trees, frequently at the very tops; and their crops are usually to be found literally filled with berries, of which I have taken from a single one as much as would fill a half-pint. These, in the fall of the year, are the Bear-berry (*Arctostaphylos uva-ursi*), the "kinnik-kinnik" of the Crees, the leaves of which are much used by the half-breeds and Indians as a substitute for, or to mix with tobacco, the Ground-Juniper (*Juniperus prostratus*), the Snow-berry (*Symphoricarpus racemosus*), the small Briers of the prairie (*Rosa*

blanda and *R. micrantha*), the Buffalo-berry (*Shepherdia argentea*), and buds of the *Hippophaë canadensis*, Cherry-birch (*Betula lenta*), and willow. In spring I have also found the crops to contain the flowers of *Anemone patens*; and Mr. Hardisty, the Master of Fort Carlton, on whose word I could rely, informed me that in the beginning of April, while travelling in search of buffalos over a part of the plains which had been burned by a prairie-fire the preceding autumn, he found in their crops a number of baked caterpillars and insects. In winter they collect in large packs, and, during fine weather, bask in the sun, perched on willows and aspens; while at other times they scrape holes through the snow down to the ground, and squat there.

Towards spring the Sharp-tailed Grouse of a neighbourhood collect at a certain spot on the prairie (usually a small mound or other raised position) twice a day, morning and evening, about the time of sunrise and sunset, to celebrate, in their peculiar way, festivities of love, displayed to so remarkable a degree by birds of this family. By the inhabitants of the fur-countries this is called "dancing." It is commenced even before the snow is off the ground; and one frequently comes by chance on such places where the snow and grass are beaten down for the space of many yards. I had often, during the spring mornings, heard the peculiar chuckling noise made by the birds on these occasions; for it can be heard at a distance of over half a mile; but having been confined to the Fort during that part of the day by magnetic observations, I was not able to search out the originators of it, which was the more annoying as the hunters and others used to tell me most wonderful stories of the "pheasants' dance." However, I was not doomed to be altogether disappointed; for, after our arduous work was completed, I went out on a trip to the plains, with the buffalo-hunters, at the commencement of April. On awaking one morning, when we were camped at a place called the "Mosquito Springs," my ears caught the well-known chuckling sound. I need hardly say that I was not long before I tied on my mocassins, and made my way towards a small knoll on the plain, which was but a short distance from our night's camp; and on nearing the place I could observe some Sharp-tailed Grouse running about. They were quite unsuspicious,

as is always the case on these occasions, and did not seem to heed my approach ; but as I wanted to get as near a view as possible, I went down on my hands and knees, and crawled towards the spot. Getting closer, I lay flat on my stomach, and pushed myself along till I gained the cover of a small stone (a rare thing on the prairies) near the top of the knoll, within ten yards of some of the birds, where I stationed myself, and was well repaid the trouble of getting there. In this instance there were eight or ten birds (there are often many more) engaged in the performance. The two nearest to me were in the attitudes of fighting-cocks opposed to each other, and, besides the feathers of the occiput, ear-coverts, and whole neck being set out to the greatest extent possible, the sharp-pointed tail was erected at right-angles to the back, thereby causing the light-coloured under tail-coverts to assume the form of a rosette ; the wings were lowered and somewhat spread out, touching the ground, the quill-feathers of which, kept in a constant quiver, made a sound like the rustling of a lady's silk dress. These two every now and then circled round, but kept their bodies in the same attitude, their heads nearly touching the ground, and again and again they "came up to the scratch." Occasionally one of the two would make a jump in the air to the height of a couple of feet, and sometimes they chased one another ; but they did not appear to fight. A little beyond these two front actors was one amusing himself by strutting about with his head as high as he could get it, and, like the others, with his tail erect ; in fact, as his back was inclined, the tail, being vertical, was bent forward towards it : this is much more than the bird is wont to do at other times ; for although, when it is frightened and about to take wing, it erects its tail, it is not nearly to the same extent. Besides these, others were running about and chasing one another in various directions, occasionally taking up the position of fighting-cocks, as already described. Then there were a couple which appeared to be doing nothing, but still they had their tails erected like the others. An odd one or two every now and then flew up and pitched again within a few yards. But above all this, and besides the rustling sound of the wings, there was a constant loud chuckling noise kept up, which added

music to the ceremony. I cannot describe the sound, but it is at times very loud, neither do I know how the birds make it. All this is the scene for a picture, and I should like to see a competent zoological artist take it in hand.

Pediæcetes urophasianellus.

This bird, described by Douglas ('Trans. Linn. Soc.' xvi. 1829, p. 136), but passed over by Richardson and Swainson in the 'Fauna Bor.-Am.,' Mr. Ross has re-established as a species; but I have only here inserted it in *italics*, as I am not yet aware on which side of the Rocky Mountains he obtained his specimens. He has also procured the egg.

BONASIA UMBELLUS.

There is a specimen in the Smithsonian Institution of the Ruffed Grouse from Red River Settlement. It is mentioned in the 'Fauna Bor.-Am.'; and I observed it from near Hudson's Bay sparingly westward close to the Forks of the Saskatchewan, but, being then ignorant of the existence of more than one species, I do not know whether some individuals of this genus which I found at the western base of the Rocky Mountains were of this or another. Mr. Ross gives both *B. umbellus* and *B. umbelloides* as inhabitants of the Mackenzie.

93. LAGOPUS ALBUS.

The Willow Grouse (*Tetrao saliceti* of the 'Fauna Bor.-Am.')

ranges across the interior, from Hudson's Bay to near the Rocky Mountains. I obtained a chance bird ('Ibis,' vol. iv. p. 8) near Fort Carlton; but it is not every winter that they migrate so far south on the Upper Saskatchewan. Nearer Lake Winipeg, at Fort Cumberland and to the eastward, they are common every winter; and numbers of specimens are received from the shores of Hudson's Bay, where it is in considerable request as an article of food in winter. (Refer to the article on Geese.) Mr. Ross mentions this species as common on the Mackenzie.

LAGOPUS RUPESTRIS.

The Rock Ptarmigan, on the authority of the 'Fauna Bor.-Am.,' inhabits the "barren grounds" of the Arctic regions and Hudson's Bay. Mr. Ross mentions it as rather rare on the Mackenzie, but that it reaches the most northern land.

LAGOPUS LEUCURUS.

The only specimens of the White-tailed Ptarmigan yet obtained have been from the Rocky Mountains. It has been found by Mr. Ross as far north as the Arctic Circle, and on the authority of American explorers extends south to lat. 39°.

Another Ptarmigan has been called *L. americanus* and *L. mutus*, from Baffin's Bay; but there seems to be a good deal of uncertainty yet, which requires clearing up, with respect to these interesting birds. I find that several English naturalists, following Sir William Jardine, have come to the conclusion that the Willow Grouse of North America and Europe and the Red Grouse of Scotland are one species. That they agree in size and form is allowed; but then, why should we not consider the Common Fieldfare and Missel Thrush of our own country as one? for when an albino is examined, it is impossible to say with certainty to which species it belongs.

Order V. GRALLATORES.

GRUS AMERICANA.

At different times, during my travels in the interior, I observed White Cranes, but was never fortunate enough to procure a specimen. The 'Fauna Bor.-Am.' records one from the Saskatchewan; and Mr. Ross from Fort Simpson, on Mackenzie River, where they are rare.

94. GRUS CANADENSIS.

The Sand-hill Crane arrives on the Saskatchewan, in large numbers, from the south, in April; and in the beginning of May I found its eggs. Individuals shot measured from 41 to 42½ in. in length, wings 19 to 21 in., and bill 5 in. along the ridge; they were found to differ considerably in the amount of rust-colour on the plumage. I found this bird as far west as the Rocky Mountains; Mr. Murray notices it from near Hudson's Bay; while the 'Fauna Bor.-Am.' records a specimen from Great Slave Lake, and Mr. Ross notices it as common on the Mackenzie to the Arctic coast. *Grus fratercula* is also given by Mr. Ross, but as an inhabitant of the west side of the Rocky Mountains only.

ARDEA HERODIAS.

The Great Blue Heron, mentioned in the 'Fauna Bor.-Am.' only as accidental in the interior, was found breeding by M. Bourgeau, in July 1858, near Battle River, a tributary of the north branch of the Saskatchewan. There were several nests in a poplar-wood, situated in a large ravine near a lake; they were about fifty feet from the ground. One was taken, which contained six eggs of a greenish blue; and a parent-bird was shot, which I carefully compared with Wilson's description. The length of the skin was 50 inches, wing $18\frac{1}{2}$ in., and bill, from the forehead, 6 in. For my own part, I never saw a Heron until I was leaving the interior, when I observed what I took for an individual of this species, in Northern Minnesota, near the 49th parallel, on the 2nd of May.

BOTAURUS LENTIGINOSUS.

The American Bittern is not an uncommon bird in the interior, although I cannot boast of a specimen; however, one is recorded in the 'Fauna Bor.-Am.' from the Saskatchewan, and there is a specimen in the Smithsonian Institution from Nelson River. Mr. Murray notices it from the coast of Hudson's Bay; and Mr. Ross gives the range on the Mackenzie to the Arctic coast.

95. *CHARADRIUS VIRGINICUS.*

The breeding-quarters of the American Golden Plover being the "barren grounds" and coasts and islands of the Arctic Sea, it is only a passing visitor in the more southern parts of British America. It is numerous in autumn on the shores of Hudson's Bay; but I do not fancy it can be a common bird on the western plains; for I only shot a single individual ('Ibis,' vol. iv. p. 8) in the fall of the year, which I took to be a maimed bird, and one again in the spring. Mr. Murray has received specimens from Hudson's Bay; and Mr. Ross notes it as abundant on the Mackenzie.

96. *ÆGIALITIS VOCIFERA.*

The Kildeer arrived in the neighbourhood of Fort Carlton on the 19th of April in 1858. I found it a difficult bird to approach within the range of small shot. Besides my own, M. Bourgeau

obtained specimens and eggs on the Saskatchewan ('Ibis,' vol. iv. p. 8).

Æ. montana, having been obtained on the Upper Missouri, will probably be found in the western parts of British territory.

ÆGIALITIS SEMIPALMATA.

In the 'Fauna Bor.-Am.' a specimen is recorded from near York Factory; and Mr. Murray mentions it from Severn House, also on the coast of Hudson's Bay, and between there and Lake Winipeg. Mr. Ross, moreover, notes it as common on the Mackenzie.

SQUATAROLA HELVETICA.

I fancied this bird was confined to Hudson's Bay, whence I have received a specimen, as well as Mr. Murray; and one is recorded thence in the 'Fauna Bor.-Am.;' but I now observe that it has been found by Mr. Ross on the Mackenzie, but it is rare.

STREPSILAS INTERPRES.

I have received several specimens of the Turnstone from York Factory, where I observed it myself in August; and it is recorded by Mr. Murray, and in the 'Fauna Bor.-Am.' from Hudson's Bay. Mr. Ross has given it as a rare bird on the Mackenzie.

RECURVIROSTRA AMERICANA.

The American Avocet is given in the 'Fauna Bor.-Am.' as from the Saskatchewan Plains, where, on the shores of the shallow lakes, it feeds on insects and small fresh-water Crustacea. I shot the bird in such localities near Fort Carlton. Mr. Ross considers it rare on the Mackenzie. The White Avocet of Cassin is considered only an accidental variety of this species.

PHALAROPUS WILSONII.

This bird is given in the 'Fauna Bor.-Am.' as breeding on the Saskatchewan, but not observed near Hudson's Bay.

PHALAROPUS HYPERBOREUS.

The same authority mentions this species as breeding on the Arctic coasts, and resorting to Hudson's Bay in autumn, whence I have received specimens. An individual is recorded from Great Bear Lake; but Mr. Ross notes it as a rare bird on the Mackenzie.

PHALAROPUS FULICARIUS is also mentioned as seen in high northern latitudes by the Arctic Expeditions; but simply on this claim I should not have included it in this list, had I not myself received specimens from Hudson's Bay in its fine breeding-plumage.

97. GALLINAGO WILSONII.

My specimen ('Ibis,' vol. iv. p. 9) is considered to be of this species of Snipe, to which also Prof. Baird refers *Scolopax drummondii* and *S. leucurus* of the 'Fauna Bor.-Am.' In all the true Snipes which I shot in the interior, I never noticed any distinctions to make me suspect more than one species. In the neighbourhood of Fort Carlton I did not observe the Snipe before May; while the last seen on the Lower Saskatchewan in the autumn was on the 1st of October. At Red River Settlement I found it on the 29th of April; but as that was in a late spring, I should imagine that it usually arrives earlier. This Snipe performs the same aerial evolutions which have been observed in the English bird. I remarked that this was usually done about sunset; and I have known it continued till an hour and a half later. The noise which the bird makes on these occasions I can only compare to quickly repeated switches (quicker than can be done by the hand) of a withe or cane in the air, which is repeated every half-minute or minute, but with occasional longer intervals. The duration of the sound is about three seconds, and is made (how I do not know, but am inclined to believe it is by the quill-feathers of the wings) as the bird descends rapidly in a vertical direction. I have known this to be done also in mid-day. These observations refer to the end of April and May, which is the love-season.

MACRORHAMPHUS GRISEUS.

Macrorhamphus scolopaceus.

I did not preserve a specimen of the Red-breasted Snipe; but I examined three which were shot out of a flock of six, near Fort Carlton, in the third week in May. They were all females, and measured 12 in. in length, $5\frac{3}{4}$ to $5\frac{7}{8}$ in. in the wing, and $2\frac{3}{4}$ to $2\frac{7}{8}$ in. along the ridge of the bill. In the 'Fauna Bor.-Am.' *M. griseus* is recorded from Great Bear Lake, under the name of

noveboracensis; but Mr. Lawrence has described a second species as *M. scolopaceus*, the principal distinction of which is size. Mr. Ross records both species from Mackenzie River. I am inclined, however, to doubt the existence of *M. scolopaceus* as a distinct species, and should not be at all surprised if all Mr. Lawrence's birds turned out to be females, the greater size of which obtains in some birds of this family.

TRINGA CANUTUS.

Arctic America and Hudson's Bay ('Fauna Bor.-Am.').

TRINGA MARITIMA.

Melville Peninsula and Hudson's Bay ('Fauna Bor.-Am.').

TRINGA ALPINA, var. AMERICANA.

Arctic Sea, Saskatchewan, and Hudson's Bay ('Fauna Bor.-Am.'). Mr. Murray also records *T. alpina* from Hudson's Bay, whence also I have seen a specimen.

TRINGA MACULATA.

Common on the Mackenzie (Bernard Ross).

TRINGA WILSONII.

Breeds within the Arctic Circle ('Fauna Bor.-Am.' as *T. pusilla* of Wilson). *Tringa minuta* (Liesler) is also given by the same authority from Hudson's Bay. Mr. Ross obtained the former on the Mackenzie.

TRINGA BONAPARTII.

A specimen is noted from the Saskatchewan in the 'Fauna Bor.-Am.' under the name of *T. schinzii*; and Mr. Ross notices it as a bird of the Mackenzie, where he procured its egg. It has been obtained by United States Expeditions as far westward as the Yellowstone branch of the Missouri.

CALIDRIS ARENARIA.

Given by Mr. Ross on the Mackenzie, is also noticed in the 'Fauna Bor.-Am.,' but no specimen is there recorded. Between Hudson's Bay and Lake Winipeg I shot what I took to be the Sanderling.

EREUNETES PETRIFICATUS.

This was first given in the 'Fauna Bor.-Am.' on the authority of Hutchins from Hudson's Bay. At York Factory, on the

mud-flats which are extensive there, I believe I obtained the Semipalmated Sandpiper. Mr. Ross mentions it on Mackenzie River.

MICROPALAMA HIMANTOPUS.

The Stilt Sandpiper is given in the 'Fauna Bor.-Am.' from the west side of Hudson's Bay, and also *Tringa douglasii*, which is probably the same species. Mr. Ross considers it very rare on the Mackenzie.

SYMPHEMIA SEMIPALMATA.

Saskatchewan ('Fauna Bor.-Am.').

98. GAMBETTA MELANOLEUCA.

Besides being included in the 'Fauna Bor.-Am.,' Mr. Murray records it from Hudson's Bay, where I observed the Tell-tale common in August; thence I found it along the whole route to the Saskatchewan, on the north branch of which it remained in 1858 as late as the 28th of October; and my specimen ('Ibis,' vol. iv. p. 9) was from near Fort Carlton, in spring, where it had arrived by the 18th of April. This bird does not seem to require muddy shores, but appears just as much at home where all is rock. Mr. Ross further extends its range to the Mackenzie, but notes it as rare in that region.

99. GAMBETTA FLAVIPES.

The Yellow-legs is mentioned in the 'Fauna Bor.-Am.' as reaching as high as the northern extremity of the continent. My specimen ('Ibis,' vol. iv. p. 9) was from near Carlton. Mr. Murray records it from Hudson's Bay, and Mr. Ross as abundant on the Mackenzie.

100. RHYACOPHILUS SOLITARIUS.

Mr. Ross found this bird common, and usually in large flocks, on the Mackenzie. It is said to breed far north, as well as in the south. Besides my specimen from the Saskatchewan ('Ibis,' vol. iv. p. 9), the 'Fauna Bor.-Am.' records one from Great Bear Lake, under the name of *Totanus chloropygus*. *Totanus calidris* of Europe is also therein given from a specimen in the British Museum, supposed to be from Hudson's Bay, as also *T. ochropus*; but neither of these is included in Professor Baird's Report on the Birds of N. America.

TRINGOIDES MACULARIUS.

Abundant on the Mackenzie (Bernard Ross).

101. ACTITURUS BARTRAMIUS.

The 'Fauna Bor.-Am.' mentions this bird as seen only in the plains of the Saskatchewan; my specimen ('Ibis,' vol. iv. p. 9) was from the same locality, where we found it breeding during summer.

TRINGITES RUFESCENS.

Rare on the Mackenzie (Bernard Ross).

102. LIMOSA FEDOA.

Mentioned in the 'Fauna Bor.-Am.' as plentiful on the Saskatchewan, where my specimen ('Ibis,' vol. iv. p. 9) was obtained; it is also recorded by Mr. Murray from Hudson's Bay, whence I have since received a specimen.

LIMOSA HUDSONICA.

A specimen is given by Mr. Murray from Hudson's Bay, whence I have also seen it; it is also mentioned in the 'Fauna Bor.-Am.' as breeding abundantly on the "barren grounds" of the far north. Mr. Ross, however, considers it rare on Mackenzie River.

NUMENIUS HUDSONICUS.

Breeds in the interior; a specimen from the Saskatchewan ('Fauna Bor.-Am.'). Slave Lake (Bernard Ross).

NUMENIUS BOREALIS.

Barren lands within the Arctic Circle: a specimen from the Rocky Mountains ('Fauna Bor.-Am.'). Mackenzie River (Bernard Ross).

The Long-billed Curlew (*N. longirostris*) is given in the 'Fauna Bor.-Am.' on the authority of a specimen in the British Museum said to be from the fur-countries.

✓ PORZANA CAROLINA.

A specimen of this bird is in the Smithsonian Institution from Red River Settlement; Mr. Murray notices it from the shores of Hudson's Bay; the 'Fauna Bor.-Am.' records it from the Saskatchewan, and Mr. Ross from the Mackenzie.

P. noveboracensis is also given in the 'Fauna Bor.-Am.,' on the authority of Hutchins.

103. *FULICA AMERICANA.*

The American Coot, or, as it is called by the half-breeds and fur-traders, the "Water-Hen," may be found in large numbers on the reedy lakes of the Saskatchewan prairies, where it arrives from the south to spend the summer at the end of April. It has a habit of making a sharp rattling noise at night, and, moreover, is said to migrate during darkness only, which the Cree Indians account for by affirming that, if these birds were to fly by day, the Ravens would chase them, taking the white bill for a piece of fat. The eggs of the Coot are collected in great numbers by the fur-traders. I went once in company with one of them, and by having a bark canoe, which we could push through the grass and reeds growing in the lake, we collected a hundred and fifty during a few hours; this, however, was considered but a poor day's work. My specimen ('Ibis,' vol. iv. p. 9) was from Fort Carlton, and Mr. Ross records it from the Mackenzie. It is considered that this bird is not found near Hudson's Bay.

Order VI. NATATORES.

CYGNUS AMERICANUS.

The American Swan, under the name of *C. bewickii*, is given in the 'Fauna Bor.-Am.' as breeding on the Arctic coast; and on the Saskatchewan I observed a species distinguishable from *C. buccinator* by the harshness of its note, which approached more to that of the Crane, migrating northward in flocks late in April. I was told that the Crees, who notice it as a smaller bird, call it the "bad-looking Swan," probably on account of many being found in the rusty plumage. Mr. George Barnston mentions ('Ibis,' vol. ii. p. 253) the hatching of a Swan near Norway House, at the north extremity of Lake Winipeg, as rather exceptional; but gives the south end of Hudson's Bay as a favourite locality, although most make their way to the far north for this purpose. Mr. Ross mentions *C. americanus* as "not common" on the Mackenzie. I have lately seen a specimen from Hudson's Bay agreeing with *C. americanus* in the yellow

spot on the bill. It measured in the wing 23 inches, $2\frac{1}{4}$ along the ridge of the bill, and had 22 tail-feathers. It was very slightly tinged with rust-colour.

104. CYGNUS BUCCINATOR.

I preserved the skin of a Trumpeter Swan, and also its wind-pipe, in natural form, which I shot at Fort Carlton, on the Saskatchewan, on the 30th of March ('Ibis,' vol. iv. p. 9). It was in the afternoon, and I had hardly made my way a quarter of a mile from the Fort when the bugle-like note of a Swan struck on my ear, and, looking up, I beheld a huge fellow coming along with a steady flight against a head wind. It was but the work of a few seconds to whip the cover off my gun, draw the bead on him, or rather ahead of him, and pull the right trigger, when a cartridge, which I had made myself, of 'BB' shot went spinning towards him, but, at the distance he seemed to be, I thought it unlikely to do him any harm. What was my delight when, after a sort of half-pause, one wing drooped, and then he fell from his great height, with a crash, into an aspen-coppice. I ran in and found him on his back, the only sign of life being a slight movement of the head, which, before I had completed reloading, had ceased. I subsequently paced the distance, and found it to be fifty-two yards: one or two grains, however, had entered his heart. Tying the legs of my prize together, I pushed the stock of my fowling-piece between them and trudged off with him at my back, his head dangling down and touching the calves of my legs; and as I entered the Fort I was greeted by the Indian yells of a pack of young urchins; for it was the "first Swan" of the season. I may say that I was also fortunate enough to kill the first Goose and first Duck that spring, which established me at once as a bird-hunter of rank amongst the Indians and half-breeds of the neighbourhood. This specimen of *Cygnus buccinator* was considerably tinged with rust-colour; it measured $60\frac{1}{2}$ in. in length, $26\frac{1}{2}$ in. in the wing; and in extent 8 ft. 3 in.; bill along the ridge $4\frac{5}{8}$, ditto to slit of mouth $4\frac{1}{2}$ in.; the second and third quill-feathers were nearly equal and the longest, the first being longer than the fourth. The eye was brown, bill black, legs, feet, and claws dull lead-black. It was a male, and weighed 23 lbs.

A description of the plumage would be, white, with the whole under parts, head, and first half of the upper part of the neck tinged with bright rush-colour, darkest on the top of the head behind a line crossing the forehead from eye to eye, which line of division is strongly marked. Of the lower parts, the chin and second half of the neck are least tinged—in fact, nearly white. This rust-colour is confined to the ends of the feathers. Shafts of all the feathers white, Dr. Richardson considers this the more common of the two Swans inhabiting the interior, and the earlier visitor, with which my observations agree. Mr. Ross notes it as common on the Mackenzie.

ANSERINÆ.

It may be well imagined how the first material evidence of spring and plenty, evinced by the arrival of waterfowl on their northward migration, is hailed by the hardy fur-traders and voyageurs of the interior, after having been shut up for months in an isolated fur-trading fort, separated by hundreds of miles of a snow and ice-bound wilderness from the most advanced limits of civilization, and perchance living on no very liberal allowance of jerked buffalo-meat or frozen white-fish. I well recollect this circumstance in the spring of 1858. It was on the 28th of March that our eager eyes, having been watching for weeks for some sure indication of a break-up in the winter, were greeted with this welcome sight. It was Sunday (happily kept even in those wild regions as a day of rest) that we observed one or two Geese and a flock of Ducks pass over, with somewhat undecided flight, evidently in search of an open piece of water or marsh as a resting-place; but there was as yet none to be found in the neighbourhood. Nevertheless the birds had rightly judged in anticipation, led by the unerring hand of Him who alone directs the progression of the seasons, and guides the world in its annual path; for, during the two following nights, the temperature only just reached the verge of freezing, leaving pools of snow-water formed by the powerful mid-day sun unskimmed by ice; and a couple of Ducks were bagged on the 29th. All became now astir, getting guns cleaned, fixing flints (the flint gun is still in general use in the fur-countries), and making ready for the campaign, each one being eager to kill

the "first goose," which is always considered somewhat of a feat. To this end, in the next few days, numerous wooden decoys appeared, all deviating, more or less, from the natural model, which, I must own, none came very near. Mine were roughly hewn out of a log of wood, with no other tools but an axe and a saw, and smeared with charcoal in place of paint; however, they answered the purpose exceedingly well; for it is wonderful what imperfect imitations, either in call or effigy, will attract waterfowl in spring-time, when there are but few places to select suitable for halting and feeding. On this subject I must refer all who take especial interest to a communication on the "Swans and Geese of Hudson's Bay," by my much-respected friend Mr. Geo. Barnston ('Ibis,' vol. ii. No. 7), whose opportunities for the observance of the fauna and flora of the northern portion of the American continent, during a life passed in the service of the Hudson's Bay Company, have been so well taken advantage of. Besides recording the different species of Geese found in the "interior," which I shall advert to under their several heads, Mr. Barnston has furnished reliable returns of the numbers annually slaughtered, from which he estimates that no less than the enormous amount of 800,000 Geese (the Brant not included) wing their way southward from the country lying between Hudson's Bay and the Rocky Mountains every autumn. Now this, I feel sure, is not over the mark; for I was informed, on good authority, that at York Factory alone the average number of Geese salted down for the use of the Hudson's Bay Company's establishment is thirty barrels in the spring and twenty-three in the fall; while Severn House supplies York Factory with other forty barrels annually. This is confirmed by a letter from my friend Mr. James R. Clare, now in charge of the northern dépôt at York Factory, in which he says:—"In an average of five years we have expended at this place annually 5857 Geese, 2155 Ducks, 1870 White Partridges (Willow Grouse), and 2480 Plovers; the quantity, however, varies according to the season, more especially in Partridges (Grouse), 4474, for example, having been expended in one of these years." These additional returns, and the immense flight of Geese which I have seen in the Saskatchewan country, induce me to believe that Mr. Barnston has far from overrated the *Anserinæ* of the "interior."

ANSER HYPERBOREUS.

The Snow-Goose (the "Wawie" of the Cree Indians, or "Wavy" of the voyageurs) is late in its arrival in spring; but, like the American Swan, delays behind the others of the family in going south in autumn, after which, as Mr. Barnston has so happily expressed it, "the coast that has been resonant with their petulant and incessant cries, and covered patchlike by their whitened squadrons, is silent and deserted, a barren and frozen shore." The species appears numerous both on Hudson's Bay and in the west, as I have seen it as far as the Rocky Mountains; and Mr. Ross says it is abundant on the Mackenzie. Although I shot the bird, I did not preserve a specimen, as I thought it a well-marked species, and I had much work on hand at the time. An anecdote was related to me concerning the Snow-Goose by Mr. Pruden, a fur-trader, which is, I think, worthy of record. His father, living at Red River Settlement, had obtained in some way or other, and managed to domesticate, a pair of "Wavies;" but, after a while, one died. The next fall, as a flock of this species was passing over, a bird singled itself out and descended to the tame Goose, and, taking up its quarters in a business-like manner, lived with it all the winter. The following spring, as some of his relations came by, he took wing, joined the flock, and proceeded to the north; but, curious enough, in the fall, returned again to his adopted winter mate, and lived with it as in the previous winter. It had done this for two or three years; but in the spring of 1857, when Mr. Pruden went to his father's house, he missed the bird, and presumed it had been killed or something had happened to it. One might have expected such an occurrence as this, had the stay been made during the breeding-season, in place of remaining to brave out the inclement season of a northern winter.

ANSER ALBATUS (Cassin).

ANSER ROSSII (Baird).

In his paper "On the Fauna of the Mackenzie River District" ('Nat. Hist. Rev.' No. 7), Mr. Bernard Ross remarks:—"There can be no doubt of the existence of three species of Snow-Geese, exclusive of the Blue Wavey of Hudson's Bay, as the Slave Lake Indians have a different name for each kind. The first which

arrives is the middle-sized species, which I believe to be *A. albatus*; next comes the smallest sort, *A. rossii*; and lastly the *A. hyperboreus*, which arrives when the trees are in leaf, and is called the Yellow Wavy by the Indians." Of *A. albatus* Mr. Ross did not procure a specimen; but he feels sure that he has shot it on Great Slave Lake, whence he obtained the third species, described by Prof. Baird as *A. rossii*. For my own part, I can only speak to having *heard* of more than one species of Snow-Goose. There is now a specimen of *A. rossii* to be seen in the British Museum, the locality of which is supposed to be California; it was purchased in Paris.

ANSER CÆRULESCENS.

When the 'Fauna Bor.-Am.' was written, there was no suspicion of this being a true species in N. America; hence Dr. Richardson noted that the young and old Snow-Geese were said to go in separate flocks: this point, however, Mr. Barnston ('Ibis,' vol. ii. p. 256) has perfectly cleared up by his labours in the field; while Mr. Cassin arrived at the same conclusion in the museum. By the observations of the former, the "Blue Wavy" (figured originally by Edwards) seems to prevail on the eastern side of Hudson's Bay and in Labrador. I cannot trace it inland to the westward. I have received two specimens from York Factory, and, on careful comparison at the British Museum with Mr. George Grey, can detect no difference in form or size from *A. hyperboreus*. The specimens, however, have every appearance of being adults; and we must take this as another example of two species being undistinguishable except by colour. The fact of the Blue Wavy being unknown in localities where the Snow-Goose is common is perhaps the strongest argument in favour of its existence as a species. For other distinctions I refer to Mr. Barnston ('Ibis,' vol. ii. p. 256).

ANSER GAMBELII.

The American White-fronted or Laughing Goose appears, as observed by Mr. Barnston, to be more an inland and western species, being seldom found in the southern part of Hudson's Bay. It is a common bird on the Saskatchewan in spring and autumn, at which latter season it is to be found in immense

numbers. Mr. Ross also notes it as common on the Mackenzie to the Arctic coast. The low marshy country bordering the lower part of the Saskatchewan River, in the neighbourhood of Fort Cumberland and "the Pas" Mission, is a great resort, where, in 1857, as I passed on my boat-voyage at the close of September, I had a good introduction to the water-fowl. I saw many Indians return in the evening, after the day's "Goose-hunt," with their bark canoes literally filled with geese; and they were mostly of this species. This, I regret, led me into hot water; for, happening to mention that in our progress, during a high breeze, we passed through a shower of feathers that I supposed came from some Indian encampment adjoining the river, I was questioned by a correspondent in the 'Zoologist' ('Zool.' 6642) as to whether I could distinguish, better than the ancient Scythians, feathers from snow; to which being forced to reply, I proposed a simple experiment admirably adapted for a closet naturalist; but this was unfortunately mistaken for "chaff," as I was informed in a second letter ('Zool.' 6763). However, I hope (for I left England shortly after, and was unable to reply again to my critic) that by this time both feathers and chaff are entirely blown away, and that I need say no more on the subject. Having carefully examined a number of the Laughing Geese, and found much difference in colouring between the old and young birds, although measuring the same size, or nearly so, I am inclined to doubt the new species *Anser frontalis* of Baird, described from specimens from Red River Settlement and Fort Thorn. Besides, Mr. Barnston does not seem to have any suspicion of a second species; and I never heard the Indians mention anything about one. A specimen of *A. gambelii*, which I received from Hudson's Bay, is now in the Museum of the Royal Artillery Institution at Woolwich, where, I may state, an application either to the Secretary or to Mr. H. Whitely, of 28 Wellington Street, will gain any naturalist ready admission to examine my specimens.

105. BERNICLA CANADENSIS.

This is the "Common Grey Goose" of the fur-traders and voyageurs of the territories of the Hudson's Bay Company. Its

range in that country extends from Hudson's Bay to the Rocky Mountains and the Arctic coast, as decided by specimens from various localities. It is the earliest of the Geese in spring. At Fort Carlton the first seen in 1858 was on the 28th of March, and at Red River Settlement on the 1st of April, while in 1856 it was on the 2nd, but in 1859, which was a very backward spring, it was much later. At Fort Carlton there were numbers at the lakes on the plains as late as the 3rd of November. It is not restricted in its breeding-ground to the far north; for I found four eggs in a nest between the north and south branches of the Saskatchewan on the 4th of May. I have before noticed the habit ('Ibis,' vol. iii. p. 319) of adopting the deserted nests of Eagles or Ravens, also mentioned in the 'Fauna Bor.-Am.,' having learned it from unquestionable authority. I have been also *told* that the birds in their first year do not breed, but remain in flocks, and can readily be distinguished by their smaller size; the last part of the sentence I am, however, inclined to doubt. With respect to the length of *B. canadensis*, I believe 36 inches to be quite up to the average for an adult. Prof. Baird gives 35 to 37, and Wilson 36 inches. I have measured many in the wild state, and never found them to deviate much. The 'Fauna Bor.-Am.' has, however, given 41 inches; and this has, unluckily, been copied by Yarrell, and is therefore recognized as the proper length. Mr. Murray, moreover, makes the two he has compared $39\frac{1}{2}$ and 40 inches respectively, which, although he does not tell us so, I suspect are the measurements of skins, and consequently worthless. My specimen ('Ibis,' vol. iv. p. 9), which was a female, measured 34 in. in length, $19\frac{1}{4}$ in. in the wing, $2\frac{1}{8}$ in. along the culmen of the bill, and the commissure $2\frac{1}{4}$ in.; bill, legs, feet, and claws wholly black; the folded wings reached just to the end of the tail, and the upper tail-coverts $3\frac{1}{2}$ in. short of it. There are some large specimens in the British Museum, from North America, one of which measured $20\frac{1}{2}$ in. in the wing, and $2\frac{3}{8}$ in. along the ridge of the bill; in colouring it does not differ from the typical *B. canadensis*. Among some skins brought home, this last autumn, from Hudson's Bay, by Capt. Herd, is a pied variety of this species. Its legs were probably, when fresh, a red flesh; the bill is part black and part yellow, and the dark

plumage has a large admixture of white ; but what establishes it as an accidental variety is, that the number of white quill-feathers is unequal in the two wings, and there are five white tail-feathers on one side, and eight on the other.

BERNICLA HUTCHINSII.

This, I suppose, we must allow as a species, as Prof. Baird places a specimen from Red River Settlement under the name, while Mr. Murray records it from Hudson's Bay, and Mr. Ross from the Mackenzie, where he found it breeding. Mr. Barnston remarks on their late arrival in spring ('Ibis,' vol. ii. p. 255), and mentions that they go north in distinct flocks. This seems to agree with my informant, mentioned in the foregoing paragraph, who may have mistaken the species. I measured an individual on the Lower Saskatchewan in September, which, although I was assured by an Indian it was the young of *B. canadensis*, I took to be *B. hutchinsii* : it was $27\frac{1}{2}$ in. in total length ; $16\frac{1}{2}$ in. in the wing ; bill along the ridge $1\frac{1}{2}$ in. ; upper tail-coverts from the end of the tail, $2\frac{1}{2}$ in. ; nail of the upper mandible dark brown, lower horn-colour ; bill, legs, and feet black, when fresh, but became lighter some time after death. Also another at Fort Carlton, late in May, measured $27\frac{1}{2}$ in. and $14\frac{1}{4}$ in., and bill $1\frac{1}{2}$ in. : it was a female ; but none of the ova showed any appearance of developing.

I cannot include Mr. Cassin's Pacific bird *B. leucopareia* in this paper, which treats only of such as are found on the eastern side of the Rocky Mountains.

Bernicla barnstonii ? (Ross).

" This bird was shot at Fort Simpson (on the Mackenzie). It is of very large size, with the breast of a bright fawn-colour. The delta of feathers running up into the lower mandible is white, instead of black, as in *B. canadensis*. The tail is of sixteen feathers. The Indians consider it a distinct species from the Canada Goose. It seldom flies in parties of more than five or six." (Bernard Ross, 'Nat. Hist. Rev.' July 1862, p. 28). It is with much gratification that I am able to transcribe the above notice of this new and large species of Goose ; for, during the latter part of my stay in the northern interior of

the American continent, I became convinced that such a bird existed, and made known my belief, both by letter to my friend Mr. George Lawrence, of New York, and also to Prof. Baird and Mr. Cassin, when I visited Washington and Philadelphia in the spring of 1859. This conviction, however, was not founded on any specimen seen, but from the verbal evidence gained from the traders and Indians of the country. No one could have been more loth to believe in a "Large Goose" than myself, because I always fancy that, if any bird is shot, it is sure to be a very large or particularly small one, so many persons being in the habit of making molehills into mountains in the sporting way; but still I was assured so frequently, by those who could have no interest in intentionally deceiving me, of the existence of this "Large Goose," that had I obtained it I intended to have named it *major*; I am delighted to find, however, that Mr. Ross has dedicated it to our mutual friend and zealous naturalist, Mr. George Barnston. These reports, moreover, exactly agree with Mr. Ross's observations of its associating only in small flocks, and being "yellow" (as the Indians said) on the breast. By some it was called the "Barren Goose."

In concluding my remarks on the *Bernicla* of Northern America, I may add that one Indian on the Saskatchewan testified to four kinds of Grey Geese (all those similar to the Canada Goose are called Grey Geese), which he specified as follows:—1, the Large Goose; 2, the Common Grey Goose; 3, the Short-necked Goose; and 4, the Small Goose. No. 1 is now known as *B. barnstonii*; No. 2 is *B. canadensis*; and No. 4, *B. hutchinsii*; but No. 3 (which, however, I never heard of from any other source) cannot be accounted for by any species yet known to naturalists. Moreover I should remark that Mr. Andrew Murray has described ('Edin. New Phil. Journal,' April 1859, p. 226) a Goose, which he considers distinct from *B. canadensis*, under the name of *B. leucolæma*, which he received "from Hudson's Bay." In colour and markings I should suppose it to be Mr. Ross's *B. barnstonii*; but the table of comparative measurements (if we except the total length, which appears to be of the *skin*) agrees so nearly with those of *B. canadensis* that I cannot see how it is to be distinguished by greater size. I reiterate that the average length

of the Canada Goose is about 36 inches ; therefore, if any one can secure a specimen measuring even 40 in. before skinning, I think he will have hit upon the Large Goose—call it *barnstonii* or *leucolæma*. The North American Geese are, however, in a “very hazy condition,” to use Mr. Ross’s words, who, writing from Mackenzie River, in a letter dated June 1, 1862 (which Mr. Murray has kindly allowed me the perusal of), remarks on the subject thus :—“As to the specific arrangement of the *Bernicla*, the more I study the matter, the greater appears the uncertainty. My opinion is, that either the *B. canadensis*, *leucomelia* [sic], *barnstonii*, *hutchinsii*, *parvipes*, *leucopareia* are only varieties, or else that more species will be required than those named above. The number of tail-feathers does not, I consider, form a specific distinction of any great value.” He then adduces some instances of discrepancies in this way, and concludes by saying, that, although he has obtained a second specimen of *B. barnstonii*, which measured 38 inches in length and 19 inches in the wing, and, besides the bright fawn-colour waved with lavender, had “the confluence of the white cheek-patches under the throat extended to the rami of the lower jaw, and there were two white spots over as well as under the eyes,” while its back was of a darker shade than the typical *B. canadensis*, yet he is doubtful of its specific identity. I have consequently placed a mark of interrogation against the specific name.

BERNICLA BRENTA.

This, I believe, is quite an Eastern American bird. The ‘Fauna Bor.-Am.’ gives the habitat as the coasts and islands of Hudson’s Bay and the Arctic Sea ; and I have received a specimen from Hudson’s Bay myself. Mr. Barnston (‘Ibis,’ vol. ii. p. 255) considers it a salt-water bird. The Black Brant (*B. nigricans*) takes its place on the Pacific shore, which Mr. Ross, from information he has received, thinks may be found on the Yukon River, which drains the opposite slope of the Rocky Mountains to the Mackenzie.

106. ANAS BOSCHAS.

Besides my specimens (‘Ibis,’ vol. iv. p. 9) from the Saskatchewan, I have received the Mallard from Hudson’s Bay ; and it is

a common bird throughout the interior, where it is known as the "Stock-Duck." Mr. Ross notes it on the Mackenzie, common to the Arctic coast.

ANAS OBSCURA.

The Dusky Duck belongs especially to the eastern seaboard of North America ; but I have received a specimen, and seen others, from York Factory, on Hudson's Bay, which is the first notice of it, I believe, from that locality.

107. DAFILA ACUTA.

The Pintail inhabits the Saskatchewan ('Ibis,' vol. iv. p. 9) and Red River to Hudson's Bay. It is also given on the Mackenzie by Mr. Bernard Ross. A male specimen, which has lately come from Hudson's Bay, has the whole of its white neck, breast, and belly, as well as the fore part of the face and head, strongly tinged with rust-colour, just as if it had inhabited water holding iron in solution. Now this, in the Swans, has been taken as a sign of youth ; but I am joined by others in considering the case open to doubt. In Snow-Geese this rustiness is common ; and it is very usual to find it on the white fronts of the Laughing Goose, even in very adult birds.

108. NETTION CAROLINENSE.

Specimens from the Saskatchewan ('Ibis,' vol. iv. p. 9) and Hudson's Bay. Common also on the Mackenzie to the Arctic Circle.

109. QUERQUEDULA DISCORS. (See 'Ibis,' vol. iv. p. 9.)

Specimens from the Saskatchewan ('Fauna Bor.-Am.') and from Slave Lake (Bernard Ross).

110. SPATULA CLYPEATA.

Specimens from the Saskatchewan ('Ibis,' vol. iv. p. 9) and Hudson's Bay ; also from Great Bear Lake ('Fauna Bor.-Am.') and the Arctic Circle, on the Mackenzie (Bernard Ross).

CHAULELASMUS STREPERUS.

The Gadwall was seen and examined on the Saskatchewan by myself ; and a specimen is recorded thence in the 'Fauna Bor.-Am.' I have, moreover, seen a specimen from Hudson's Bay.

MARECA AMERICANA.

The American Widgeon is common on the Saskatchewan, where I shot it. The Smithsonian Institution has a specimen from between Lake Winipeg and Hudson's Bay; and Mr. Murray records it from the last locality, whence I have also seen it; and Mr. Ross notices it as common on the Mackenzie.

AIX SPONSA.

A specimen of the Summer- or Wood-Duck is recorded in the 'Fauna Bor.-Am.' as killed on the Lower Saskatchewan; and Mr. Murray mentions specimens from the west side of Hudson's Bay.

FULIX MARILA.

A male from the Saskatchewan is recorded in the 'Fauna Bor.-Am.,' and there is a specimen in the Smithsonian Institution from Red River Settlement. Besides, Mr. Ross records the "Big Black-head," as it is called in America, on Great Slave Lake. I have examined several specimens sent from Hudson's Bay, and they differ from a good adult bird, killed in England, in having the black and white markings on the back of a coarser nature, the almost entire absence of the fine speckling on the shoulders of the wings, the scapulars without any markings, and the black of the region of the vent does not run so far up on the belly. These peculiarities may be simply due to age; but having noticed them, I feel bound to record them. The too common error of those drawing up local lists, of making species in order to swell their *special* fauna in point of number, I am well aware of, and have taken care to guard against it. I am one, however, who believes that it is better to recognize a rather doubtful species than introduce varieties (except accidental) into ornithology; for I am persuaded, if once such a system is commenced, the science will become divested of much of its interest, and we shall not get men to sacrifice their comfort, and perhaps risk their lives, in collecting abroad, if, when they return home, their species are to be called merely varieties.

FULIX AFFINIS.

There is a specimen of the American Scaup in the Smithsonian Institution from Nelson River; Mr. Murray gives it from Hud-

son's Bay, whence I have also received specimens; and on the Saskatchewan I shot one or other of these two species, but was uncertain which. Mr. Ross mentions *F. affinis* as abundant on the Mackenzie to the Arctic Circle.

FULIX COLLARIS.

Specimen from the Saskatchewan ('Fauna Bor.-Am.'), under the name of *Fuligula rufitorques*, and from Fort Simpson, on the Mackenzie.

111. AYTHYA VALLISNERIA.

My specimen, from Fort Carlton ('Ibis,' vol. iv. p. 10), is referred to the Canvas-back; and in the 'Fauna Bor.-Am.' one is also given from the Saskatchewan. The Pochard is also mentioned in that work, but there is no note of the locality of a specimen. Mr. Ross does not note *A. vallisneria* north of Great Slave Lake.

112. BUCEPHALA AMERICANA.

First seen at Fort Carlton in the spring, on the 10th of April ('Ibis,' vol. iv. p. 10); specimens also from Hudson's Bay. Included in the 'Fauna Bor.-Am.' as *Clangula vulgaris*. Mr. Ross notes the Golden-Eye on the Mackenzie to the Arctic Coast. One distinctive mark given between this and the following species is the absence of a black band across the white of the wing. Mr. Yarrell, however, figures both male and female with this line quite distinct; and if this is constant in European specimens, it is a good distinction between *C. vulgaris* and *C. americana*. There is a male specimen, however, in the British Museum, from Nova Scotia, which has the black band on the wing very distinct.

BUCEPHALA ISLANDICA.

Described in the 'Fauna Bor.-Am.,' from a specimen killed in the Rocky Mountains, as *Clangula barrovii*. This specimen is now in the Museum of the Smithsonian Institution at Washington.

113. BUCEPHALA ALBEOLA.

Specimen from the Saskatchewan ('Ibis,' vol. iv. p. 10) and Hudson's Bay. Mr. Ross gives it abundant on the Mackenzie, to its mouth.

HISTRIONICUS TORQUATUS.

I examined a specimen of the Harlequin Duck at York Factory, on Hudson's Bay; and the 'Fauna Bor.-Am.' records one from the eastern declivity of the Rocky Mountains. Mr. Ross mentions it on the Mackenzie.

HARELDA GLACIALIS.

A specimen is noted in the 'Fauna Bor.-Am.' from the Saskatchewan; and Mr. Murray records it from Hudson's Bay, where I myself saw it, and whence I have since received specimens. Mr. Ross also gives the Long-tailed Duck, or "South Southerly," as abundant on the Mackenzie.

MELANETTA VELVETINA.

I have seen and examined the American Velvet Scoter from Hudson's Bay; Mr. Murray records it from the country between there and Lake Winipeg; and Mr. Ross includes it among the birds of Mackenzie River. The 'Fauna Bor.-Am.' gives *Oidemia fusca*, the European bird, from Great Bear Lake; but although this may have been a mistake, owing to *M. velvetina* not being then known as distinct, still I think *M. fusca* is sometimes found on the west side of the Atlantic, as there is a specimen in the British Museum, presented by the Hudson's Bay Company. I may here state, with regard to the geographical range of *M. velvetina*, that I have a specimen, which has been carefully compared, shot by myself at Chin-Kiang, on the Yang-tsze River, in China. This bird is also found on the Pacific coast of North America. I would also remind observers that its striking dissimilarity to *M. fusca* is in the form and colouring of the bill, which comes nearer to the Common Scoter (*Oidemia nigra*) of Britain.

PELIONETTA PERSPICILLATA.

I have received a specimen of the Surf Scoter from York Factory, on Hudson's Bay, from which locality Mr. Murray has obtained it; besides, there is one from Nelson River in the Smithsonian Institution, and another is recorded from Great Bear Lake in the 'Fauna Bor.-Am.;' it is also given as abundant, by Mr. Ross, on the Mackenzie.

OIDEMIA AMERICANA.

The American Scoter was described by Swainson, from Hud-

son's Bay, in the 'Fauna Bor.-Am.;' and both Mr. Murray and myself have received specimens from the west coast of Hudson's Bay.

SOMATERIA MOLLISSIMA.

I have received from Hudson's Bay fine specimens of the Common Eider.

SOMATERIA V-NIGRUM.

This species of Eider, hitherto found only on the Pacific, is recorded by Mr. Ross as an inhabitant of Great Slave Lake, in latitude 61° N., and longitude 114° W. It is said to be rare in that locality, only two specimens having been obtained. This is another instance of the occurrence of the fauna of the Pacific in this northern and western region, which I have before adverted to. After all, it is nothing more than what we should expect; for on observing the configuration of the north-western part of the American continent, it is only natural that the birds wintering about Vancouver Island and to the southward should find their way, in summer, across the small portion of continent intervening between them and the Arctic Ocean, in place of making their way as far westward as Behring's Strait. There is another Eider (although it is placed in another genus), belonging to the American continent, *Arctonetta fischeri*, likewise described by Mr. George Gray, from specimens from Norton Sound, in Russian America*.

SOMATERIA SPECTABILIS.

The King Eider is noticed from the Arctic regions in the 'Fauna Bor.-Am.;' and I have seen specimens from Hudson's Bay.

ERISMATURA RUBIDA.

A specimen is given in the 'Fauna Bor.-Am.' from the Saskatchewan; and I examined one at York Factory, on Hudson's Bay. Mr. Ross records it as an inhabitant of Great Slave Lake.

114. MERGUS AMERICANUS.

I found the American Goosander as far west as the Rocky Mountains ('Ibis,' vol. iv. p. 10), and have seen a specimen from Hudson's Bay. It is given in the 'Fauna Bor.-Am.' as *M. merganser*.

* See Proc. Zool. Soc. 1855, p. 211.

MERGUS SERRATOR.

Mr. Murray and myself have both received the Red-breasted Merganser from Hudson's Bay. It is recorded in the 'Fauna Bor.-Am.' from the Saskatchewan, and by Mr. Ross as common on the Mackenzie.

LOPHODYTES CUCULLATUS.

The Hooded Merganser is also given in the 'Fauna Bor.-Am.' from the Saskatchewan; and Mr. Murray records it from Hudson's Bay, whence I have also seen it; Mr. Ross also records its occurrence on the Mackenzie.

PELECANUS ERYTHORHYNCHUS.

The American Pelican, recorded from English River in the 'Fauna Bor.-Am.,' and seen by me on the Saskatchewan, has been supposed not to range east of Lake Winnipeg; but Mr. Murray has recorded a specimen from Hudson's Bay. This is, however, only the locality from which he received it; and he informs me he cannot say where the bird was killed. The Grand Rapid, at the mouth of the Saskatchewan, is a favourite resort for numbers of Pelicans; and Mr. Ross notices them as frequenting the Mackenzie.

GRACULUS DILOPHUS.

A specimen of the Double-crested Cormorant, from which the species was described by Swainson in the 'Fauna Bor.-Am.,' was killed on the Saskatchewan. Cormorants are at times common on that river, but whether they are all of this species remains for future ornithological explorers to determine. *G. dilophus* is mentioned by Mr. Ross at Great Slave Lake, but no other species.

Although I observed species of Petrels, Shearwaters, and Skaws on my voyage from England through Hudson's Straits to Hudson's Bay, I cannot include them among the birds of the interior of British North America; however, the following species of the genus *Stercorarius* are on good authorities.

STERCORARIUS CATARRACTES.

Mackenzie River (Bernard Ross).

STERCORARIUS POMARINUS.

Mackenzie River (Bernard Ross). Hudson's Bay ('Fauna Bor.-Am.').

STERCORARIUS PARASITICUS.

Mackenzie River (Bernard Ross).

Var. *richardsonii*, Mackenzie River (Bernard Ross & 'Fauna Bor.-Am.'). I have also received a specimen of Richardson's Skaw, from Hudson's Bay.

STERCORARIUS CEPHUS.

I have received from Hudson's Bay two specimens of Buffon's Skaw, whence Mr. Murray also notes it, and Mr. Ross from Mackenzie River.

LARUS GLAUCUS.

I have seen a specimen among some skins from Hudson's Bay; the wing measured $16\frac{1}{2}$ inches.

LARUS GLAUDESCENS.

Mackenzie River (Bernard Ross).

115. LARUS ARGENTATUS.

Besides my specimen ('Ibis,' vol. iv. p. 10), killed at York Factory, on Hudson's Bay, Mr. Murray also records the Herring Gull from Severn House, a little further south. Besides these, there is a specimen in the Smithsonian Institution from Nelson River; and Mr. Bernard Ross records it from the Mackenzie.

LARUS CALIFORNICUS.

Mackenzie River (Bernard Ross).

116. LARUS DELAWARENSIS.

The Ring-billed Gull, given in the 'Fauna Bor.-Am.' under (according to Lawrence, in Baird's Report) the various names of *canus*, *zonorhynchus*, and *brachyrhynchus*, is an inhabitant of the Saskatchewan, on the lower part of which river my specimen ('Ibis,' vol. iv. p. 10) was obtained. Mr. Murray also gives what he calls a variety of *L. zonorhynchus* from Hudson's Bay. Mr. Ross, I find, in a list brought up to June 1862, gives a Gull under the name of *L. brachyrhynchus*, and another *Larus*, name unknown, also *Blasipus heermanni*.

117. CHROICOCEPHALUS FRANKLINII.

Franklin's Rosy Gull, described from the Saskatchewan, was found by myself ('Ibis,' vol. iv. p. 10) to be common on the lakes of the buffalo-plains in summer, where it breeds.

118. CHROICOCEPHALUS PHILADELPHIA.

Bonaparte's Gull, under the name of *bonapartii*, is given in the 'Fauna Bor.-Am.,' and by Mr. Bernard Ross, from Mackenzie River. I found it in great numbers at the mouth of Hayes River, on the west coast of Hudson's Bay ('Ibis,' vol. iv. p. 10). Mr. Murray also gives it from the same coast; and the Smithsonian Institution contains one from Nelson River.

RISSA TRIDACTYLA.

Interior and Hudson's Bay ('Fauna Bor.-Am.').

RISSA SEPTENTRIONALIS.

Mackenzie River (Bernard Ross).

PAGOPHILA EBURNEA.

Hudson's Bay ('Fauna Bor.-Am.').

STERNA CASPIA.

Mackenzie River (Bernard Ross).

STERNA WILSONII.

Mackenzie River (Bernard Ross). Specimen from Nelson River in Smithsonian Institution.

STERNA MACROURA.

I received a specimen of the American Arctic Tern from my friend Mr. J. R. Clare, in charge of York Factory, Hudson's Bay. Mr. Bernard Ross gives it on Great Bear Lake. The 'Fauna Bor.-Am.' mentions it under the name of *S. arctica*, as also does Mr. Murray, from Hudson's Bay.

STERNA FORSTERI.

The 'Fauna Bor.-Am.' gives *S. hirundo* from the Saskatchewan, which in Professor Baird's Report is referred to this species. Mr. Murray also notes *S. hirundo* from Hudson's Bay.

119. HYDROCHELIDON PLUMBEA.

My specimen ('Ibis,' vol. iv. p. 10), as well as one called in the 'Fauna Bor.-Am.' *Sterna nigra*, are from the Saskatchewan;

and Mr. Bernard Ross records it at Mackenzie River. Mr. Murray has given *Sterna nigra* (Linn.) from Hudson's Bay.

‘COLYMBUS TORQUATUS.

Common throughout the interior in the summer season, but most frequently found on lakes. Specimens from Mackenzie River (Bernard Ross & ‘Fauna Bor.-Am.’) and Hudson's Bay (Murray).

‘COLYMBUS ARCTICUS.

The Black-throated Diver is given by Mr. Murray from Hudson's Bay, and also recorded in the ‘Fauna Bor.-Am.’ from thence; I have also seen specimens. Mr. Bernard Ross mentions the variety *pacifica* as occurring sparingly on Mackenzie River. He also gives *Colymbus adamsii*, G. R. Gray, which he states occurs in numbers on Great Slave Lake.

‘COLYMBUS SEPTENTRIONALIS.

Hudson's Bay (‘Fauna Bor.-Am.’). Mackenzie River (Bernard Ross). I have also seen specimens from Hudson's Bay.

‘PODICEPS GRISEIGENA.

Red River Settlement (Smithsonian Institution). Mackenzie River (‘Fauna Bor.-Am.’ & Bernard Ross).

‘PODICEPS CRISTATUS.

Saskatchewan River (‘Fauna Bor.-Am.’).

120. PODICEPS CORNUTUS.

Specimens from Mackenzie River recorded by Mr. Bernard Ross and in the ‘Fauna Bor.-Am.’ from between Hudson's Bay and Lake Winipeg by Mr. Murray, a specimen in the Smithsonian Institution, collected by Mr. Kennicott on the Red River of the North, and my own (‘Ibis,’ vol. iv. p. 10) from the Saskatchewan Plains and Hudson's Bay, show the Horned Grebe to be widely distributed in the interior.

PODICEPS AURITUS.

Mackenzie River (Bernard Ross).

PODILYMBUS PODICEPS.

Mackenzie River (Bernard Ross & ‘Fauna Bor.-Am.’).

URIA GRYLLE.

Mr. Murray records the Black Guillemot, with a slight pecu-

liarity, from Hudson's Bay; it is also mentioned in the 'Fauna Bor.-Am.;' besides, I observed it in Hudson's Straits, but that locality does not come within the range of this paper. And I may here observe that the fact of not embracing the eastern Arctic lands prevents my including more than one other of the species of Guillemots (as is the case also with the *Laridæ*) given in the 'Fauna Bor.-Am.,' which is

URIA LOMVIA, the Foolish Guillemot, given under the name of *U. troile*, from York Factory, on the western coast of Hudson's Bay.

Thus I bring to an end a list which, although it does not carry on its face a circular note of credit to general ornithologists, yet, from the labour bestowed upon it, may, I hope, prove useful to future inquirers on North American birds. To say that I am aware of its defects would be to criminate myself, because it might be in justice remarked, why did not I rectify them? I will therefore observe that I have drawn from every reliable authority within my reach, but have never given the information so gained as if it were my own, the scantiness of which is, I am afraid, too apparent. When remarking on my own labours in the field, I would ask the reader to bear in mind that, as a member of a Government Exploring Expedition, my duties were widely different from those of a zoologist; in fact, I had properly nothing to do with natural history, my work being of a nature which required the use of the sextant more than the fowling-piece, the pen and pencil instead of the dissecting-knife, and observations of the movements of magnets rather than of birds. It was consequently only spare moments at uncertain times that I was able to devote to my favourite pursuit, ornithology; while the putting together of these notes has been done at a period when memory cannot serve me. I will therefore conclude with the simple request that if any censoriously inclined naturalist meditate severe criticism, he will be guided by the memorable advice of 'Punch'—questionable perhaps in the case in which it was offered, but often so very appropriate—"Don't!"

London, November 1862.